

## ***Celastrina nigra* and its synonym *C. ebenina* (Lepidoptera: Lycaenidae)**

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**Abstract.** *Celastrina nigra* Forbes 1960 is the valid name, not *C. ebenina* Clench 1972, because Forbes raised the infrasubspecific *nigra* Edwards 1884a to subspecies rank. *C. nigra* is not a homonym of *Scolitantides orion nigra* Gerhard 1882.

Both *nigra* and *ebenina* have been used as the name of the same *Celastrina* species, *nigra* by Scott (1984, 1986), *ebenina* by Wagner and Mellichamp (1978), Miller and Brown (1981), and Ferris (1989). This paper shows that *C. nigra* Forbes 1960 is the correct name and *C. ebenina* Clench 1972 is a synonym; it summarizes a lengthy paper on the case, which is available upon request.

The oldest names for *C. nigra* are by Strecker (1878): "*Lycaena lucia* ab. a female *nig.*" (actually a male), and "ab. b female *intermedia*". Both were named as aberrations and are unavailable infrasubspecific names (ICZN 1985 art. 1[b][5]); Strecker used *nig.* to abbreviate *nigra*, *niger*, and *nigrum*, but evidently intended this *nig.* to abbreviate the feminine *nigra* because he erroneously thought the insect was female. Edwards (1884a) described *Lycaena pseudargiolus* infrasubspecific form *nigra* as a "melanic dimorphic male form"—a melanic form limited to males—of *C. argiolus* form *violacea* (Edwards); thus it is an infrasubspecific name, a minority element within a population, certainly not a subspecies. Miller and Brown (1981) erred in stating that *nigra* was named as an aberration, a word not mentioned by Edwards. The name *nigra* Edwards was actually described in W. H. Edwards' (1884a, June) *Butterflies of North America* II:315-319 (p. "1-5"), which appeared before Edwards' (1884b, p. 306, Dec.) "Revised Catalogue", mistakenly cited by Miller and Brown (1981) as the original description.

Forbes (1960) described *Plebeius argiolus nigra*: "Race or rather local variety **nigra** Edwards (**H 31:4**—female *intermedia* Strecker) is solid brown above in male, and dominantly blackish in female. It is limited to a small area in West Virginia and western Pennsylvania so far as I know." Forbes' word "race" clearly describes a subspecies; his words "rather local variety" are less clear but signify a geographically restricted type of animal of at least a population ("local variety" in sloppy American English generally means a subspecies with very restricted range); his description of the limited range in W.Va.-Pa. is a clear indication of a subspecies (ICZN 1985 article 45[f][ii], 1961 art. 45[d][ii]).

**Rules.** The 1985 ICZN rules apply precisely to the case. Article 10(c) states that an infrasubspecific name that satisfies the other criteria of availability becomes available when the name is used for a species or subspecies. Edwards' *nigra* satisfies all criteria of availability except that it is infrasubspecific (art. 1[b][5], 45[e]); Forbes' (1960) *nigra* satisfies all criteria including treating it as a subspecies and giving a diagnosis. The 1985 rules regarding "forms" and "varieties" also indicate that *Plebeius argiolus nigra* Forbes 1960 is an available name, while *Lycaena nigra* Edwards 1884 is unavailable. ICZN 1985 article 45(g) states that: before 1961, the use of either of the terms "variety" or "form" is to be interpreted as subspecific rank, but if the intention of the work reveals that infrasubspecific status is meant (as in *nigra* Edwards), the name is infrasubspecific, UNLESS before 1985 it has been treated as an available name and either adopted as the name of a species or subspecies (which Forbes [1960] and Scott [1984] did), or treated as a senior homonym in which case the name is deemed to be subspecific from the date of its establishment ("establishment"—according to the glossary definition—was in 1960 as *Plebeius argiolus nigra* Forbes).

The 1948 to 1985 rules mandated more rigorous standards for publishing subspecies after a cutoff date: before 1951 in the 1948 rules in effect until 1960, before 1961 in the 1961-1985 rules. Before and after this cutoff, a name is a subspecies if the original description clearly indicated the taxon is a subspecies, and a name is infrasubspecific if the author expressly indicated that he regarded the taxon as infrasubspecific. But if the author did *not* clearly state in the original publication whether he regarded it as being a subspecies or an infrasubspecific form, a name established *before* the cutoff is a subspecies, but *after* the cutoff the name is infrasubspecific. The rollback of the date to the start of 1961 in the 1961 Code which Clench (1972) had to follow, means that pre-1961 names are (1) subspecies if described as such, (2) subspecies if not clearly described as subspecies or infrasubspecific (thus even if Clench thought—or anyone now thinks—that Forbes' description was ambiguous), (3) subspecies if merely described as "varieties" or "forms" without accompanying description clarifying status. *C. ebenina* would be valid *only* if Forbes had unambiguously described *nigra* as an infrasubspecific name, but Forbes did the opposite by describing it as a "race"—a subspecies.

Readers are warned that the example at the end of 1985 Article 45(g) is grossly misleading in implying that infrasubspecific names raised to subspecies rank take authorship and date from the original publication of the infrasubspecific name. 1985 article 87(b) states that "Examples do NOT form part of the legislative text of the Code" so the example must be ignored because the implication contradicts articles 23(j), 50(c)(i), 10(c), and 45(g)(ii)(1); and the example is ambiguous because the author of the name in the example may have published a second paper in the same year treating the varieties as subspecies, in which case the example could also be (properly) interpreted as meaning that the name should take the

authorship and date of the second paper raising the names to subspecies rank. We have informed the ICZN that this example must be replaced.

Ferris (1989) was mistaken when he stated that “*ebenina* is valid for the edition of the code [1961/1964] under which Clench worked”; *C. nigra* Forbes (1960) was a valid available subspecies under the 1961/1964 rules (articles 10[b], 45[d][i, ii]), and *ebenina* became a synonym the day it was named in 1972. And *nigra* Edwards 1884 is unavailable under the 1961/1964 rules (art. 1, 45[c], 45[d][iii]). The 1961/1964 rules were written imprecisely because 1961 article 45(e)(i) states that before 1961 “variety” or “form” are not to be interpreted as either infrasubspecific or subspecific rank, and article 17(9) states that a name remains available even though before 1961 it was proposed as a “variety” or “form”; a strict interpretation of these two rules in isolation from others might suggest that they override 45(d)(iii) (but not 45[c]) in cases in which the word “form” or “variety” is used, possibly making *nigra* an available species group name even from 1884 to 1960. But logic clearly shows that the only way all parts of rules 17 and 45 can be applied simultaneously without contradiction is if the *intent* of the 1961/1964 rules was that a name merely described and ranked *only* as “form” or “variety”, *without* infrasubspecific modifiers such as “melanic dimorphic” etc., be treated as an available subspecific name, whereas a name described as “form” or “variety” *with* qualifying modifiers signifying infrasubspecific status was to be treated as infrasubspecific and unavailable. This is the clearly stated intention of the 1948 rules which form the basis of the 1961 rules, and is the clearly written intention of the 1985 rules. Obviously, *C. nigra* Edwards 1884 is infrasubspecific thus unavailable.

*C. nigra* Forbes in fact is valid and *nigra* Edwards invalid and unavailable, in all versions of the rules as far back as 1842. The unofficial Stricklandian Code (Strickland, 1842) did not permit the use of infrasubspecific names or varieties. The unofficial Dall Code (1878) permitted the use of “varieties” but not infrasubspecific names such as “melanic dimorphic male forms”. The Règles from 1905 onward did not cover infrasubspecific names until 1948 when the current rules regarding infrasubspecific names were devised.

**Homonymy.** *Lycaena pseudargiolus* infrasubspecific form *nigra* Edwards 1884 was named two years after *Lycaena orion* variety *nigra* (Gerhard 1882, p. 126). The latter is now a ssp. of *Scolitantides orion* (Pallas) 1771 (1985 article 45[g] etc.), and is evidently a senior synonym of all three other ssp. now used in the species. But neither *nigra* Edwards nor *nigra* Forbes is a homonym, because *nigra* Edwards is infrasubspecific so is not covered by the 1961-1985 Code, and *nigra* Forbes was named in genus *Plebeius*.

Earlier rules did not make *nigra* Edwards a homonym either. The unofficial Dall Code (1878) did provide for homonymy of infrasubspecific names, but only if both names were *within a single species* (rules LXVI and LVII), and *nigra* Gerhard and *nigra* Edwards were always in *separate* species.



The 1905-1947 Régles mentioned only subspecies and species and did not cover infrasubspecific names, so *nigra* Edwards was not subject to homonymy.

From 1948 until the 1961 Code, the Régles allowed homonymy within infrasubspecific names (ICZN, 1950, p. 93, rule [9][a]), but homonymy applied separately to (A) subspecies/species names than to (B) infrasubspecific names, such that (A) and (B) were self-contained and mutually independent sectors of nomenclature. Homonymy was not possible since *nigra* Edwards is infrasubspecific and *nigra* Gerhard is a subspecies (*nigra* Gerhard was named as a "variety" but is a subspecies by 1948 rule [3] [ICZN, 1950] and all later Régles and Codes).

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